

Veterans Administration Medical Center
Wilkes-Barre, Pennsylvania
Site Investigation / Remedial Investigation
Asbestos and Lead in Paint Survey Report
Elevated Water Storage Tank
February 2013

Site Investigation / Remedial Investigation Asbestos and Lead in Paint Survey Report Elevated Water Storage Tank

Veterans Administration Medical Center Wilkes-Barre, Pennsylvania

Prepared For:
Department of Veterans Affairs
Veterans Administration Medical Center
1111 East End Blvd.
Wilkes-Barre, PA 18711
Wilkes-Barre, Pennsylvania

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February 2013





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1.0 EXECUTIVE SUMMARY

Hatch Mott MacDonald (HMM) initially performed a Site Investigation (SI) of the elevated water storage tank (EWST) at the Veterans Administration Medical Center, located in Wilkes-Barre, Pennsylvania. The SI included a limited Identification Survey for Asbestos Containing Material (ACM) and Screening for Lead in Paint. The scope of work included a visual inspection to identify suspect ACM and a Lead Survey that included obtaining samples of the soil below and surrounding the EWST and supplemental samples of the paint utilized on the EWST. These samples were submitted for laboratory analysis for lead content. HMM performed the initial surveys and sampling on March 15, 2011. The result of the Asbestos Identification Survey has not identified any asbestos material associated with the EWST including the valve pit and pump station. The Lead Survey has resulted in determining that elevated concentrations of lead were detected in six of eight soil samples. The supplemental samples of the paint confirmed the previous sample obtained by MBA that the paint contains lead in concentrations ranging from 0.014% to 0.58% (140 mg/kg to 5,800 mg/kg). Based upon the SI for the soil, HMM performed a Remedial Investigation (RI) of the soil. The RI was conducted to delineate lead contamination in the soils and included the additional sampling of soil which was conducted on May 10, 2011 and September 13, 2012 and the submission of samples to a certified laboratory for analysis of total lead. The result of the RI has delineated the extent of lead contamination, both horizontally and vertically in the area of the EWST. The comments and conclusions presented herein are based upon the conditions at the time of HMM's site reconnaissance and sampling effort.

2.0 ASBESTOS IDENTIFICATION SURVEY

2.1 INTRODUCTION

2.1.1 Purpose

The purpose of the Asbestos Identification Survey was to examine the ancillary structures to the EWST for the presence of suspect ACM in locations that may be impacted by renovations to the water supply system and/or demolition of the EWST and associated structures.



2.1.2 Limitations and Exceptions of the Survey

The Asbestos Survey was limited to locations the valve vault and pump station associated with the EWST. The survey was not all inclusive and did not address potential underground structures (such as piping, etc.) that were not visible in the valve vault or pump station.

2.2 METHODS

2.2.1 Walk-Through Visual Inspection

The visual inspection of the subject structures for the presence of suspect asbestos containing material (SACM) was performed. If any SACM was identified samples would be obtained for laboratory analysis. The Asbestos Identification Survey was performed by Kevin Herrighty of HMM. Mr. Herrighty is an United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) accredited inspector from HMM. This work was conducted on March 15, 2011.

2.3 ASBESTOS IDENTIFICATION SURVEY FINDINGS

Based upon the visual observation of the structures, HMM did not identified any suspect materials.

3.0 LEAD SURVEY

3.1 INTRODUCTION

3.1.1 Purpose

On March 15, 2011, Kevin Herrighty of HMM conducted a limited inspection for the presence of lead associated with the EWST. The survey was conducted to determine if the paint coatings, current and/or historically, have contributed to an increase of lead to the environment and to determine the current lead concentrations for health and safety purposes during construction.



3.2 METHODS

3.2.1 Bulk Material Sampling and Analysis

Soil samples were obtained of the top 2 inches of soil at random locations below and surrounding the EWST. Four (4) samples were obtained beneath the EWST and four (4) samples obtained at varying distances surrounding the tank. Samples were obtained at each location by utilizing a dedicated stainless steel trowel. Samples were placed in glass sample jars and assigned a sample identification number. The information was transferred onto a laboratory chain of custody document which was kept with the samples thorough submission to the laboratory.

Paint samples were obtained by scraping the painted surface and catching the paint chips in a sampling bag. Samples of the central core and one leg of the EWST were obtained as well as paint on the cover to the valve vault, painted coating on the pipes and valves within the vault and paint on the concrete cover slab of the vault.

3.3 LEAD SURVEY FINDINGS

3.3.1 Soil Analytical Results

The soil analytical results have indicated elevated concentrations of lead in the soils beneath the EWST. These samples, S1 through S-4, had concentrations ranging from 927 to 1,800 milligrams per kilogram (mg/kg). Two of the four samples obtained surrounding the EWST, the two closest, also indicated elevated concentrations of lead. Sample S-5 and S-8 exhibited concentrations of 657 mg/kg and 862 mg/kg, respectively. The remaining two locations, S-6 and S-7 exhibited concentrations under 200 mg/kg, (191 mg/kg and 97.6 mg/kg, respectively. The typical allowable concentration of lead in soil (residential standard) is 400 mg/kg (USEPA). A summary of the analytical results is provided in Table 1 and the Laboratory Analytical Results for these samples are provided in Attachment 1. Figure 1 provides the soil sample locations.



3.3.2 Paint Analytical Results

Any concentration of lead in the paint is considered Lead Containing Paint as it relates to potential worker exposure during construction activities. The laboratory analytical results for samples have confirmed the earlier sample that lead is present in the various paint coatings. The complete Laboratory Analytical Results are provided in Attachment 2.

3.4 ASSESSMENT AND RECOMMENDATIONS

The Lead Survey has identified the elevated concentration of lead in the soil beneath and surrounding the EWST. Typically, concentrations under 400 mg/kg do not require any further investigation. Concentrations between 400 mg/kg and 2,000 mg/kg that are bare soil require some form of covering, either vegetative or impermeable surface. Excavation and off-site disposal is also an option. The VA has decided to remove the impacted soils, as such further sampling to delineate the impacted soils is required. Please note painted surfaces containing lead that are disturbed (e.g., during demolition activities) could cause adverse health effects to workers or nearby persons in the area. Additional environmental impacts to the surrounding soil may also result from deteriorated or disturbed paint. Proper work actions will be required to prevent lead exposure during construction activities.

4.0 REMEDIAL INVESTIGATION FOR LEAD IN SOIL

4.1 INTRODUCTION

4.1.1 Purpose

Based upon the analytical results of the SI conducted In March of 2011, HMM performed supplemental soil sampling for lead in the area of the EWST. The SI consisted of sampling eight (8) sample locations identified as S-1 through S-8. At six of the eight locations lead was detected above the United States Environmental Protection Agency's Direct Contact Numeric Value soil standards of 400 milligrams per kilogram (mg/kg) in the soils beneath the EWST. The soil concentrations above the EPA standard ranged from 657 mg/kg to 1800 mg/kg. As such, HMM returned to the site to obtain additional samples for vertical and horizontal delineation and ultimately the delineation will be used to remediate the area.



4.2 METHODS

4.2.1 Sampling and Analysis

At the locations of the initial surficial soils sample locations, S-1 through S-8 (obtained from the 0 to 0.5 feet in depth), additional soil samples were obtained at various depths (1.0 to 1.5 and 2.0 to 2.5 feet in depth) to vertically delineate the limits of lead contamination. Additional sample points were indentified further out from the EWST to perform the horizontal delineation, sample locations S-1A through 5A, S-8A, S-2B through S-4B, and S-9 through S-16 (May 10, 2011 sample event). At these locations multiple samples were obtained from various depths (0 to 0.5, 1.0 to 1.5 and 2.0 to 2.5 feet in depth). Additional samples were obtained on September 13, 2012 at several of the prior locations at a depth of 3.0 to 3.5 feet and three additional delineation samples, S-17 to S-19 at depths of 0 to 0.5, 1.0 to 1.5 and 1.5 to 2.0 feet. At each surficial soil sample location (0 to 0.5 foot in depth), soil samples were obtained with a pre-cleaned, dedicated stainless steel trowel and placed in a laboratory provided sample bottle. At depth samples were obtained by removing the soil to the required depth by either a shovel or hand auger which were field decontaminated between each sample location. The soil sample was obtained using a precleaned dedicated stainless steel trowel. Each sample was assigned a sample identification number. The information was transferred onto a laboratory chain of custody document which was kept with the samples thorough submission to the laboratory. The samples were submitted to Accutest Laboratory (Accutest) of Dayton, New Jersey (May 2011 samples) and Alpha Analytical of Westborough, Massachusetts (September 2012 samples). Both laboratories are certified by the National Environmental Laboratory Accreditation Program as well as the State of Pennsylvania.

4.3 REMEDIAL INVESTIGATION FINDINGS

4.3.1 Soil Analytical Results

Accutest was instructed to analyze the upper most sample at each location during the first round of analysis for lead. At each sample location that exceeded the 400 mg/kg standard, the next deeper sample from that location was analyzed in the next analytical round for lead. Due to time constraints for the specification preparation, Alpha was instructed to analyze all samples.



The soil analytical results for the samples collected on May 10, 2011 (Analytical Round 2) indicated elevated concentrations of lead in soils in other areas surrounding the EWST but not at depths deeper than the initial samples. These samples; S-1 through S-8, exhibited concentrations under 400 mg/kg at concentration ranging from 22.5 to 216 mg/kg, indicating that there were no elevated concentrations of lead below 1 foot of the initial samples collected on March 15, 2011. Six of the seventeen samples obtained surrounding the EWST, samples S-2A, S-4A, S-8A, S-9, S-12, and S-13, indicated elevated concentrations of lead and required further delineation both vertically and horizontally. The remaining eleven samples exhibited concentrations under 400 mg/kg.

The soil analytical results for the samples submitted for analysis on May 31, 2011 (Analytical Round 3) indicated elevated concentrations of lead at depths deeper than three of the six positive samples collected during Round 2. Samples S-9, S-12, and S-13 were collected 1 foot below the surface and exhibited concentrations of 529 mg/kg, 650 mg/kg, and 436 mg/kg, respectively. These samples required further delineation vertically below the surface. The remaining three locations, S-2A, S-4A, and S-8A, exhibited concentrations under 300 mg/kg, (136 mg/kg, 194 mg/kg, and 293 mg/kg, respectively).

The soil analytical results for the samples submitted for analysis on June 21, 2011 (Analytical Round 4) indicated elevated concentrations of lead at depths deeper than all three of the positive samples collected during Round 3. These samples, S-9, S-12, and S-13 were collected 2 feet below the surface and exhibited concentrations of 1150 mg/kg, 405 mg/kg, and 413 mg/kg, respectively. These samples required further delineation vertically below the surface.

The soil analytical results for the samples collected on September 13, 2012 (Analytical Round 5) indicated that the horizontal and vertical limits of the lead contamination were delineated. Samples from S-9, S-12, and S-13 were collected 3 feet below the surface and were all below the 400 mg/kg standard. Additional delineation sample points S-17 through S-19 (samples from each at 0 to 0.5, 1.0 to 1.5 and 1.5 to 2.0 feet below surface) were also all below the 400 mg/kg standard.

The soil analytical results from each round ultimately delineated both the vertical and horizontal extend of the lead contamination. Please refer to Table 1 for Summary of Analytical Results -



Lead in Soil Delineation Samples by each round of analysis. The abridged Laboratory Data Packages are provided in Attachment 3 for samples obtained on May 10, 2011 and Attachment 4 for the samples obtained on September 13, 2012. Figure 1 provides the location of the samples.

5.0 REMEDIAL ACTION WORKPLAN

The Remedial Investigation through soil sampling has identified the elevated concentration of lead in the soil below and adjacent to EWST. Based upon the results, it is anticipated to excavate the impacted soil to the limits shown on Figure 2. Sample for waste characterization should be obtained by the contractor for the parameters required by the disposal facility. It is anticipated that the material will not be hazardous. Note that the soil should not be excavated until the EWST has been removed. The excavated soil shall be replaced with certified clean soil.

6.0 CONCLUSION

The Remedial Investigation has delineated the extent of lead contamination in the soils and specifications for the removal of the soil have been prepared.



TABLES

Table 1 – Summary of Analytical Results Lead Delineation Samples

TABLE 1
Lead in Soil Delineation Samples - Analytical Results
Veterans Administration Mediacal Center, Wilkes-Barre, PA

Sample Location	Depth (Ft.)	Round 1 March 15, 2011	Round 2 May 10, 2011	Round 3 May 31, 2011*	Round 4 June 21, 2011*	Round 5 September 13, 2012
S-1	0 - 0.5	1800				
5-1	1.0 - 1.5		216			
S-1A	0 - 0.5		362			
S-2	0 - 0.5	1220			4-1	
5 2	1.0 - 1.5		74.3			
S-2A	0 - 0.5		428			
5-2A	1.0 - 1.5			136		
S-2B	0 - 0.5		209			
S-3	0 - 0.5	927				
U-3	1.0 - 1.5		195			
S-3A	0 - 0.5		101			
S-3B	0 - 0.5		77.1			
S-4	0 - 0.5	1800				
5-4	1.0 - 1.5		139			
S-4A	0 - 0.5		472			
5-4A	1.0 - 1.5			194		
S-4B	0 - 0.5		194			
S-5	0 - 0.5	657				
3-3	1.0 - 1.5		22.5			
S-5A	0 - 0.5		215			
S-6	0 - 0.5	191				
5-0	1.0 - 1.5		71.6			
S-7	0 - 0.5	97.6				
5-7	1.0 - 1.5		103			
S-8	0 - 0.5	862				
5-8	1.0 - 1.5		54.7			
C 0 A	0 - 0.5		453			
S-8A	1.0 - 1.5			293		
	0 - 0.5		864			
C 0	1.0 - 1.5			529		
S-9	2.0 - 2.5				1150	
	3.0 - 3.5					53
S-10	0 - 0.5		307			
S-11	0 - 0.5		72.3			
	0 - 0.5		729			
0.44	1.0 - 1.5			650		
S-12	2.0 - 2.5				405	
11	3.0 - 3.5					50

^{* =} Date samples submitted for analysis.

All concentrations in milligrams per kilogram (mg/kg).

Bold = Excedance of 400 mg/kg Target Concentration (Direct Contact Numeric Value).

TABLE 1
Lead in Soil Delineation Samples - Analytical Results
Veterans Administration Mediacal Center, Wilkes-Barre, PA

Sample Location	Depth (Ft.)	Round 1 March 15, 2011	Round 2 May 10, 2011	Round 3 May 31, 2011*	Round 4 June 21, 2011*	Round 5 September 13, 2012
	0 - 0.5		774			
S-13	1.0 - 1.5			436		
5-13	2.0 - 2.5				413	
	3.0 - 3.5					360
S-14	0 - 0.5		344			
S-15	0 - 0.5		70			
S-16	0 - 0.5		16.5			
	0 - 0.5					220
S-17	1.0 - 1.5					27
	1.5- 2.0					27
	0 - 0.5					69
S-18	1.0 - 1.5					14
	1.5- 2.0	, w				20
	0 - 0.5					350
S-19	1.0 - 1.5					360
	1.5- 2.0					320
Field Blank		<0.003	< 0.003			< 0.0002

All concentrations in milligrams per kilogram (mg/kg).

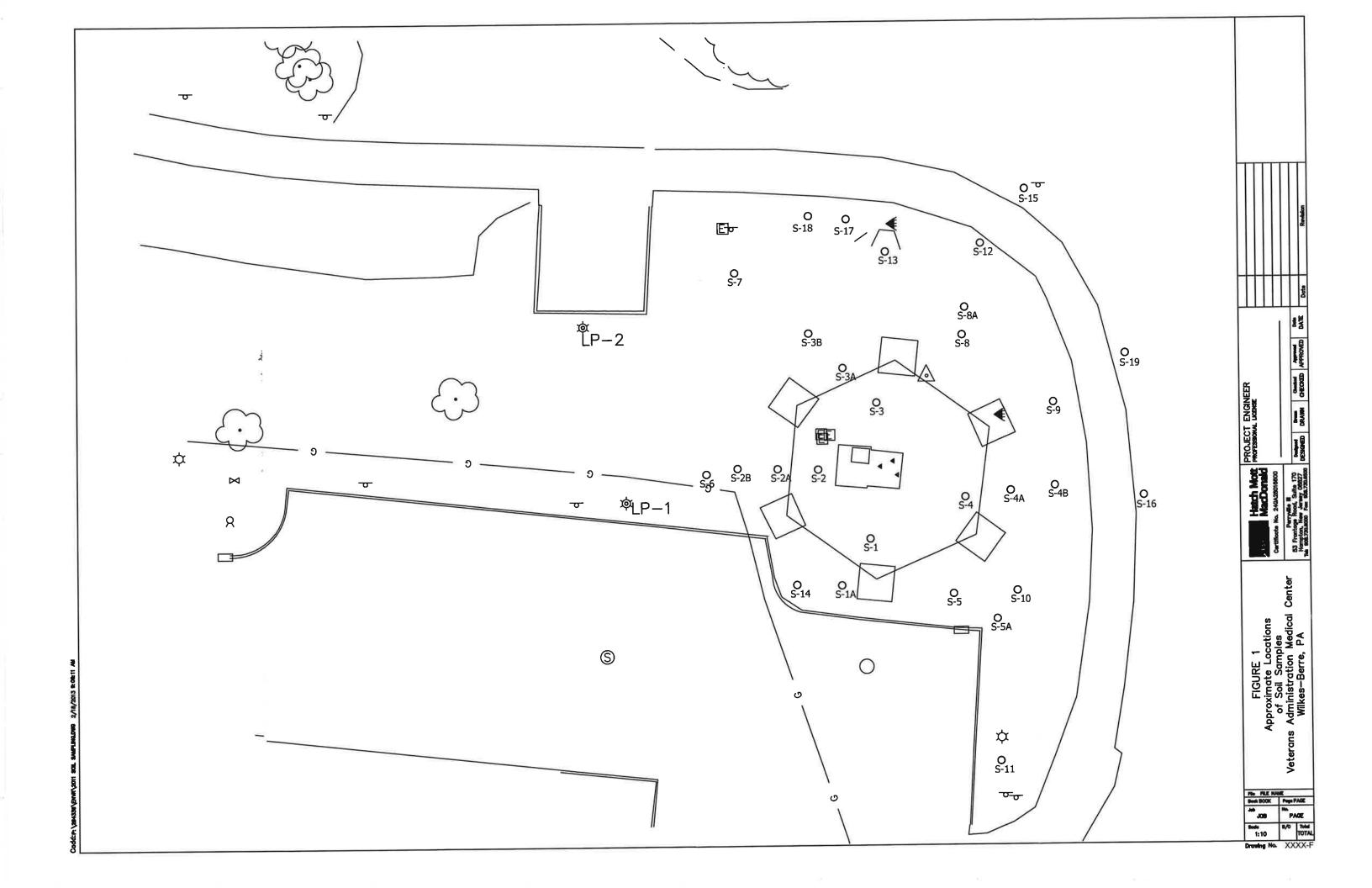
Bold = Excedance of 400 mg/kg Target Concentration (Direct Contact Numeric Value).

^{* =} Date samples submitted for analysis.



FIGURES

Figure 1 – Approximate Location of Soil Samples Figure 2 – Limits of Excavation of Contaminated Soil



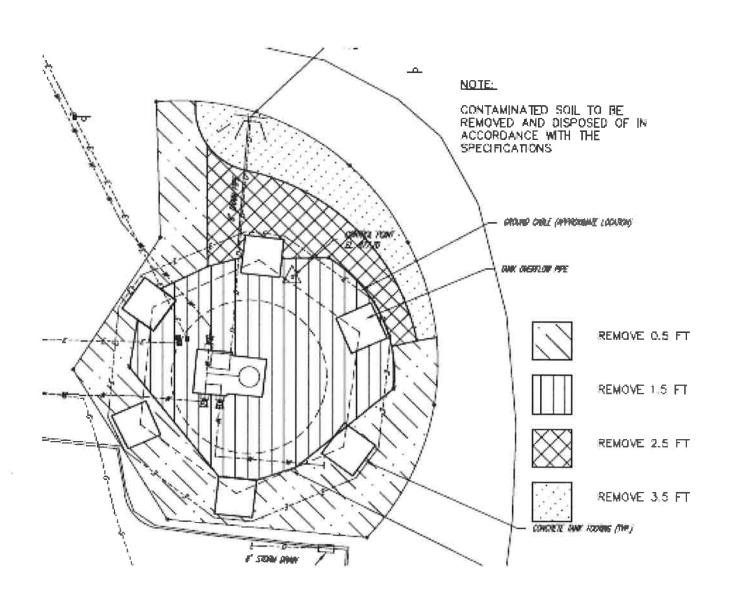


FIGURE 2 Limits of Excavation of Contaminated Soil Veterans Administration Medical Center Wilkes-Barre, Pennsylvania



ATTACHMENT 1

Soil Analytical Results - March 15, 2011

TABLE 1
Analytical Results
Lead in Soil Samples
Veterans Administration Medical Center
Wilkes-Barre, PA

Sample Location	Depth (Ft.)	Conc. Lead (mg/kg)
S-1	0 - 0.5	1800
S-2	0 - 0.5	1220
S-3	0 - 0.5	927
S-4	0 - 0.5	1800
S-5	0 - 0.5	657
S-6	0 - 0.5	191
S-7	0 - 0.5	97.6
S-8	0 - 0.5	862
Field Blank	: ++ (<0.003

Bold = Excedance of 400 mg/kg Target Concentration (Direct Contact Numeric Value).

Page 1 of 1

Client Sample ID: VA-S1

JA70775-1 Lab Sample ID: SO - Soil

Date Sampled: 03/15/11 Date Received: 03/17/11 Percent Solids: 70.2

Matrix:

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Method Analyzed By Result RLUnits DF Prep Analyte SW846 3050B ² 03/19/11 03/21/11 ND SW846 6010B ¹ 1800 2.9 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: VA-S2

JA70775-2 Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11

Percent Solids: 68.7

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method RL Prep Analyzed By Method Units DF Analyte Result SW846 3050B ² 03/19/11 03/21/11 ND SW846 6010B ¹ 1220 3.0 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: VA-S3

JA70775-3 Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11

Percent Solids: 71.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method Units DF Ргер RLAnalyte Result SW846 3050B ² 03/19/11 03/21/11 ND SW846 6010B ¹ 927 2.8 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: VA-S4

Lab Sample ID: JA70775-4

Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11

Percent Solids: 76.8

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Method Prep Method Prep Analyzed By RL Units DF Analyte Result SW846 3050B ² $03/19/11 \quad 03/21/11 \quad ND$ SW846 6010B ¹ 1800 2.6 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: VA-S5

JA70775-5 Lab Sample ID: Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11 Percent Solids: 71.7

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method Result RLUnits DF Prep Analyte SW846 3050B ² 03/19/11 03/21/11 ND SW846 6010B ¹ 2.7 mg/kg 1 Lead 657

Page 1 of 1

Client Sample ID: VA-S6

Lab Sample ID: JA70775-6

Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11

Percent Solids: 74.7

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method Prep Analyte Result RLUnits DF SW846 3050B ² 03/19/11 03/21/11 ND SW846 6010B ¹ 191 2.6 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: VA-S7

Lab Sample ID: JA70775-7

Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11

Percent Solids: 73.4

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 97.6
 2.8
 mg/kg
 1
 03/19/11
 03/21/11
 ND
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

VA-S8 Client Sample ID:

Lab Sample ID: JA70775-8

Matrix:

SO - Soil

Date Sampled: 03/15/11

Date Received: 03/17/11

Percent Solids: 75.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method RLUnits DF Prep Result Analyte SW846 6010B 1 SW846 3050B ² 2.6 mg/kg 1 03/19/11 03/21/11 ND Lead 862

Page 1 of 1

Client Sample ID: VA-FB

Lab Sample ID: JA70775-9

Matrix:

AQ - Field Blank Soil

Date Sampled: 03/17/11

Date Received: 03/17/11 Percent Solids: n/a

Project:

Veterans Hospital, Wilkes Barre, PA

Total Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 <3.0</td>
 3.0
 ug/l
 1
 03/21/11
 03/21/11
 VC
 SW846 6010B 1
 SW846 3010A 2



ATTACHMENT 2

Paint Chip Analytical Results



CERTIFICATE OF ANALYSIS

9000 Commerce Parkway, Suite B Mount Laurel, NJ 08054 Toll Free 877-428-4285 Local: 856-231-9449

Fax: 856-231-9818

Client:

Hatch Mott MacDonald

27 Bleeker StPO Box 1008

Millburn

NJ

07041-1008

Report Date:

3/24/2011

Report Number:

0311008148

Project:

Veterans Hospital; 3/15/11

Project No.:

264326

LEAD PAINT SAMPLE ANALYSIS SUMMARY

Lab No.	Client No.	<u>Location / Description</u>	Concentration <u>Lead By Weight (%)</u>
4248849	VA-P-01	Black Paint Vault-Pipe	0,027
4248850	VA-P-02	Red Paint Vault-Handle	0.018
4248851	VA-P-03	Silver W/Red Primer Paint Vault-Pipe	0.58
4248852	VA-P-04	Blue W/Off-White Primer Paint Tank-Center Core	0.014
4248853	VA-P-05	Blue W/Black Primer Paint Vault-Cover	0,0071
4248854	VA-P-06	Blue W/Red Primer Paint Tank-Support Leg	0.17
4248855	VA-P-07	Blue Paint Concrete	0,094***

NATIONAL LEAD LABORATORY ACCREDITATION PROGRAM (NLLAP)

AIHA No. 100188 / NYSDOH-ELAP No. 11021

Analysis Methods: ASTM D3335-85A "Standard Method To Test For Low Concentrations Of Lead In Paint By Atomic Absorption Spectrophotometry"

EPA SW846-(7420/7421) "Standard Method To Test For Low Concentrations Of Lead In Soils, Sludges and Sediments By AAS"

Comments:

Regulatory limit is 0.5% lead by weight (EPA/HUD guidelines). Recommend multiple sampling for all samples less than regulatory limit for confirmation. All results are based on the samples as received at the lab. IATL assumes that appropriate sampling methods have been used and the data upon which these results are based have been accurately supplied by the client. Method Detection Limit (MDL) per EPA Method 40 CFR Part 136 Apendix B. Reporting Limit (RL) based upon Lowest Standard Determined (LSD) in accordance with AIHA-ELLAP policies. LSD=0.2 ppm MDL=0.0024% by weight, RL=0.010% by weight (based upon 100 mg sampled). * Insufficient sample provided to perform QC reanalysis (<200 mg) ** Not enough sample provided to analyze (<50 mg) ** Not enough sample provided to analyze treatment of the confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any government agency. This report shall not be

Date Received:	3/17/2011		
Date Analyzed:	3/24/2011	Approved By:	
Analyst:	C. Shaffer	—	Frank E. Ehrenfeld, III Laboratory Director



ATTACHMENT 3

Soil Analytical Results – May 10, 2011



05/30/11



Technical Report for

Hatch Mott MacDonald

Veterans Hospital, Wilkes Barre, PA

264336

Accutest Job Number: JA75602

Sampling Date: 05/10/11



Report to:

Hatch Mott MacDonald, I & E. P.O. Box 1008 27 Bleeker Street Millburn, NJ 07041 Sandra. Howland@hatchmott.com

ATTN: Kevin Herrighty

Total number of pages in report: 185



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis VP, Laboratory Director

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.





CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Hatch Mott MacDonald Job No

JA75602

Site:

Veterans Hospital, Wilkes Barre, PA

Report Date

5/30/2011 3:44:54 PM

On 05/11/2011, 25 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA75602 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix: AO

Batch ID: MP58320

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA75558-3MS, JA75558-3MSD, JA75558-3SDL were used as the QC samples for metals.

Matrix: SO

Batch ID: MP58305

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA75402-9MS, JA75402-9MSD, JA75402-9SDL were used as the QC samples for metals.

Matrix: SO

Batch ID:

MP58329

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA75602-1MSD, JA75602-1SDL, JA75602-1MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Lead are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Lead are outside control limits. Probable cause due to matrix interference.

Wet Chemistry By Method SM18 2540G

Matrix: SO

Batch ID:

GN51046

The data for SM18 2540G meets quality control requirements.

Matrix: SO

Batch ID:

GN51068

The data for SM18 2540G meets quality control requirements.

Matrix: SO

Batch ID:

GN51090

The data for SM18 2540G meets quality control requirements.



Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

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ACCUTEST.
JA75602



Sample Results	
Report of Analysis	

Page 1 of 1

Client Sample ID: S-1(1.5)
Lab Sample ID: JA75602-1

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 83.2

Project: Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 216
 2.4
 mg/kg
 1
 05/23/11
 05/23/11
 GT
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID: S-1A(0.5) Lab Sample ID: JA75602-3

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received:

05/11/11 Percent Solids: 82.3

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method Analyte Result RL Units DF Ргер SW846 3050B ² 362 2.5 mg/kg 1 05/23/11 05/23/11 GT SW846 6010B ¹ Lead

Page 1 of 1

Client Sample ID: S-2(1.5)

Lab Sample ID: JA75602-6 Matrix: SO - Soil

Date Sampled: 05/10/11 Date Received: 05/11/11

Percent Solids: 86.6

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method RLUnits DF Prep Method Analyte Result SW846 3050B ² 74.3 2.3 mg/kg 1 05/23/11 05/23/11 GT SW846 6010B ¹ Lead

Client Sample ID: S-2A(0.5)

Lab Sample ID:

Matrix:

JA75602-8 SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 76.8

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

RLUnits DF Prep Analyzed By Method Prep Method Analyte Result 2.6 SW846 6010B ¹ SW846 3050B ² 05/23/11 05/23/11 GT Lead 428 mg/kg 1

Client Sample ID: S-2B(0.5) Lab Sample ID:

JA75602-11

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 75.6

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RLUnits DF Ргер Analyzed By Method Prep Method 2.6 SW846 3050B ² 209 05/23/11 05/23/11 GT Lead mg/kg 1 SW846 6010B 1

Report of Analysis Page 1 of 1

Client Sample ID: S-3(1.5) Lab Sample ID:

JA75602-14 Matrix: SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 85.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Analyte Result RL Units DF Prep Method Lead 195 2.4 mg/kg 1 05/23/11 05/23/11 GT SW846 6010B ¹ SW846 3050B ²

Page 1 of 1

Client Sample ID: S-3A(0.5)

Lab Sample ID: Matrix:

JA75602-16 SO - Soil

Date Sampled: 05/10/11

Date Received: Percent Solids: 87.7

05/11/11

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method RLUnits DF Prep Analyte Result SW846 3050B ² 05/23/11 05/24/11 GT Lead 101 2.2 mg/kg 1 SW846 6010B ¹

Page 1 of 1

Client Sample ID: S-3B(0.5) Lab Sample ID:

JA75602-19

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 84.8

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyte Result RL Units DF Prep Analyzed By Method 77.1 2.3 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ² Lead mg/kg 1

Page 1 of 1

Client Sample ID: S-4(1.5) Lab Sample ID:

JA75602-22

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 85.2

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RLUnits DF Prep Analyzed By Method Prep Method SW846 3050B ² Lead 139 2.3 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B 1

Page 1 of 1

Client Sample ID: S-4A(0.5) Lab Sample ID:

Matrix:

JA75602-24 SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids:

85.1

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Result RLUnits DF Prep Analyzed By Method Prep Method Analyte 2.4 SW846 3050B ² 472 05/23/11 05/24/11 GT Lead mg/kg 1 SW846 6010B ¹

Page 1 of 1

Client Sample ID: S-4B(0.5) Lab Sample ID:

JA75602-27

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 84.7

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyte Result RLUnits DF Prep Analyzed By Method SW846 3050B ² Lead 194 2.4 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹

Page 1 of 1

Client Sample ID: S-5(1.5)

Lab Sample ID: JA75602-30 Matrix: SO - Soil

Date Sampled: 05/10/11 Date Received: 05/11/11 Percent Solids: 91.0

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RLAnalyzed By Prep Method Units DF Prep Method Lead 22.5 2.1 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ²

Page 1 of 1

Client Sample ID: S-5A(0.5)

Lab Sample ID: JA75602-32 Matrix: SO - Soil

75602-32 Date Sampled: 05/10/11
- Soil Date Received: 05/11/11
- Soil Propert Solids: 81.7

Percent Solids: 81.7

Project: Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 215
 2.4
 mg/kg
 1
 05/23/11
 05/24/11
 GT
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID: S-6(1.5) Lab Sample ID:

JA75602-35

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 87.2

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Analyte Result RLUnits DF Prep Method 71.6 2.2 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B 1 SW846 3050B ² Lead

Page 1 of 1

S-7(1.5) Client Sample ID:

Lab Sample ID: JA75602-37

Matrix:

Lead

SO - Soil

2.4

Date Sampled: 05/10/11

SW846 6010B ¹

Date Received: 05/11/11 Percent Solids: 84.2

Project:

Veterans Hospital, Wilkes Barre, PA

mg/kg 1

Metals Analysis

Prep Method Analyzed By Method RLUnits DF Prep Result Analyte SW846 3050B ²

05/23/11 05/24/11 GT

(1) Instrument QC Batch: MA26421 (2) Prep QC Batch: MP58329

103

Page 1 of 1

Client Sample ID: S-8(1.5) Lab Sample ID:

JA75602-39

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11 Percent Solids: 88.6

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte	Result	RL	Units DF	Prep	Analyzed By	Method	Prep Method
Lead	54.7	2.3	mg/kg 1	05/23/11	05/24/11 GT	SW846 6010B ¹	SW846 3050B ²

Page 1 of 1

Client Sample ID: Lab Sample ID:

S-9(0.5)

Matrix:

JA75602-41 SO - Soil Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 78.5

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 864
 2.0
 mg/kg
 1
 05/23/11
 05/24/11
 GT
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID: S-10(0.5)

Lab Sample ID: JA75602-44 Matrix:

SO - Soil

Date Sampled: 05/10/11 Date Received: 05/11/11

Percent Solids: 83.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	307	2.4	mg/kg	1	05/23/11	05/24/11 GT	SW846 6010B ¹	SW846 3050B ²

Page 1 of 1

Client Sample ID: S-11(0.5)

Lab Sample ID: JA75602-47

Date Sampled: 05/10/11 Date Received: 05/11/11

Matrix: SO - Soil Date Received: 05/1
Percent Solids: 83.5

Project: Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 72.3
 2.4
 mg/kg
 1
 05/23/11
 05/24/11
 GT
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID: S-12(0.5)

JA75602-50 Lab Sample ID:

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11

Percent Solids: 80.9

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Analyte Result RLUnits DF Prep Method

Lead 729 2.5 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹

SW846 3050B ²

Page 1 of 1

Client Sample ID: S-13(0.5)

Lab Sample ID: JA75602-53

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received:

05/11/11

Percent Solids: 79.4

Project:

Lead

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RL

2.5

Units DF

mg/kg 1

Analyzed By Prep 05/20/11 05/21/11 GT

Method SW846 6010B 1 Prep Method

SW846 3050B ²

774 (1) Instrument QC Batch: MA26408

(2) Prep QC Batch: MP58305

Page 1 of 1

Client Sample ID: S-14(0.5) Lab Sample ID:

JA75602-56

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11 Percent Solids: 83.1

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	344	2.5	mg/kg	1	05/20/11	05/21/11 GT	SW846 6010B ¹	SW846 3050B ²

Page 1 of 1

Client Sample ID: S-15(0.5) JA75602-59 Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 75.0

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Result RLUnits DF Prep Analyzed By Method Analyte SW846 3050B ² 05/20/11 05/21/11 GT SW846 6010B ¹ 70.0 2.6 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: S-16(0.5) Lab Sample ID:

JA75602-62

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 90.5

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

RL Units DF Prep Analyzed By Method Prep Method Analyte Result SW846 3050B ² Lead 16.5 2.2 mg/kg 1 05/20/11 05/21/11 GT SW846 6010B ¹

Page 1 of 1

Client Sample ID: FIELD BLANK

Lab Sample ID: JA75602-65

Matrix:

AQ - Field Blank Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: n/a

Project:

Veterans Hospital, Wilkes Barre, PA

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	< 3.0	3.0	ug/l	1	05/21/11	05/22/11 GT	SW846 6010B ¹	SW846 3010A ²

(1) Instrument QC Batch: MA26412

(2) Prep QC Batch: MP58320

Page 1 of 1

Client Sample ID: S-8A(0.5)

Lab Sample ID: Matrix:

JA75602-66 SO - Soil

Date Sampled: 05/10/11

Date Received: Percent Solids: 80.1

05/11/11

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

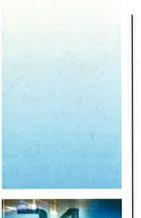
Prep Method Analyzed By Method Analyte Result RLUnits DF Prep SW846 3050B ² 05/20/11 05/21/11 GT SW846 6010B ¹ 453 2.5 mg/kg 1 Lead

(1) Instrument QC Batch: MA26408

(2) Prep QC Batch: MP58305



06/17/11



Technical Report for

Hatch Mott MacDonald

Veterans Hospital, Wilkes Barre, PA

264336

Accutest Job Number: JA75602

Sampling Date: 05/10/11



Report to:

Hatch Mott MacDonald, I & E. P.O. Box 1008 27 Bleeker Street Millburn, NJ 07041 Sandra. Howland@hatchmott.com

ATTN: Kevin Herrighty

Total number of pages in report: 280



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis VP, Laboratory Director

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Hatch Mott MacDonald Job No JA75602

Site: Veterans Hospital, Wilkes Barre, PA Report Date 6/17/2011 10:01:23 A

On 05/11/2011, 31 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA75602 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix: AQ Batch ID: MP58320

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA75558-3MS, JA75558-3MSD, JA75558-3SDL were used as the QC samples for metals.

Matrix: SO Batch ID: MP58305

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA75402-9MS, JA75402-9MSD, JA75402-9SDL were used as the QC samples for metals.

Matrix: SO Batch ID: MP58329

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA75602-1MSD, JA75602-1SDL, JA75602-1MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Lead are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Lead are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Matrix: SO Batch ID: MP58620

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA77164-2MS, JA77164-2MSD, JA77164-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Lead are outside control limits for sample MP58620-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM18 2540G

Г	Matrix: SO	Batch ID:	GN51046
NA.	The data for SM18 2540G meets	quality control requirem	ents.
	Matrix: SO	Batch ID:	GN51068
a	The data for SM18 2540G meets	quality control requirem	ents.
	Matrix: SO	Batch ID:	GN51090
	The data for SM18 2540G meets	s quality control requirem	ents.
	Matrix: SO	Batch ID:	GN51697
-	The data for SM18 2540G meets	s quality control requirem	ents.
	Matrix: SO	Batch ID:	GN51698

The data for SM18 2540G meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



Sample Results	
Report of Analysis	×.



SW846 3050B ²

Report of Analysis

Client Sample ID: S-1(1.5)

JA75602-1 Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

SW846 6010B ¹

Percent Solids: 83.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Result RL Units DF Analyzed By Prep Method Analyte Prep Method

05/23/11 05/23/11 GT

mg/kg 1 Lead 216 2.4

(1) Instrument QC Batch: MA26415 (2) Prep QC Batch: MP58329

RL = Reporting Limit



Page 1 of 1

Client Sample ID: S-1A(0.5) Lab Sample ID:

JA75602-3 SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 82.3

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	362	2.5	mg/kg	1	05/23/11	05/23/11 GT	SW846 6010B ¹	SW846 3050B ²

Page 1 of 1

Client Sample ID: S-2(1.5) Lab Sample ID:

JA75602-6

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids:

86.6

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RL Units DF Prep Analyzed By Method Prep Method 74.3 2.3 SW846 3050B ² Lead mg/kg 1 05/23/11 05/23/11 GT SW846 6010B ¹

Page 1 of 1

Client Sample ID: S-2A(0.5) Lab Sample ID:

JA75602-8

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11 Percent Solids: 76.8

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Analyte Result RLUnits DF Prep Method

SW846 3050B ² Lead 428 2.6 05/23/11 05/23/11 GT SW846 6010B ¹ mg/kg 1

Page 1 of 1

Client Sample ID: S-2A(1.5) Lab Sample ID:

Matrix:

JA75602-9 SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Project:

Veterans Hospital, Wilkes Barre, PA

Percent Solids: 86.6

Metals Analysis

Analyzed By Method Prep Method Result RLUnits DF Prep Analyte 2.3 06/09/11 06/14/11 ND SW846 6010B ¹ SW846 3050B ² 136 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: S-2B(0.5) Lab Sample ID:

JA75602-11

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 75.6

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method RLUnits DF Prep Analyzed By Method Analyte Result 2.6 05/23/11 05/23/11 GT SW846 6010B ¹ SW846 3050B ² 209 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: S-3(1.5) Lab Sample ID:

JA75602-14 SO - Soil

Date Sampled: 05/10/11 Date Received: 05/11/11

Percent Solids: 85.2

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte RLAnalyzed By Result Units DF Prep Method Ргер Method SW846 3050B ² Lead 195 2.4 mg/kg 1 05/23/11 05/23/11 GT SW846 6010B ¹

Page 1 of 1

Client Sample ID: S-3A(0.5) Lab Sample ID:

JA75602-16

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 87.7

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method Analyte Result RLUnits DF Prep 101 2.2 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ² Lead

Page 1 of 1

Report of Analysis

Client Sample ID: S-3B(0.5)

Lab Sample ID: JA75602-19 Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 84.8

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RLUnits DF Analyzed By Prep Method Prep Method Lead 77.1 2.3 05/23/11 05/24/11 GT SW846 3050B ² mg/kg 1 SW846 6010B ¹

Page 1 of 1

Client Sample ID: S-4(1.5) Lab Sample ID: JA75602

JA75602-22 SO - Soil

Date Sampled: 05/10/11 Date Received: 05/11/11 Percent Solids: 85.2

Matrix:

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	139	2.3	mg/kg	1	05/23/11	05/24/11 GT	SW846 6010B ¹	SW846 3050B ²

Page 1 of 1

SW846 3050B ²

Client Sample ID: S-4A(0.5) Lab Sample ID:

JA75602-24

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 85.1

SW846 6010B ¹

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyte Result RLUnits DF Prep Analyzed By Method

05/23/11 05/24/11 GT

Lead 472 2.4 mg/kg 1

Page 1 of 1

Client Sample ID: S-4A(1.5)

Lab Sample ID: JA75602-25 Matrix: SO - Soil Date Sampled: 05/10/11 Date Received: 05/11/11 Percent Solids: 88.8

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 194
 2.3
 mg/kg
 1
 06/09/11
 06/14/11
 ND
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID:

S-4B(0.5)

Lab Sample ID: Matrix:

JA75602-27

Date Sampled: 05/10/11

SO - Soil

Date Received: 05/11/11

Percent Solids:

84.7

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Result RLUnits DF Prep Method Analyte SW846 3050B ² 194 2.4 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹ Lead

Page 1 of 1

Client Sample ID: S-5(1.5)

JA75602-30 Lab Sample ID: Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: Percent Solids: 91.0

05/11/11

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Result RLUnits DF Prep Analyzed By Method Analyte SW846 3050B ² SW846 6010B ¹ mg/kg 1 05/23/11 05/24/11 GT Lead 22.5 2.1

Page 1 of 1

Client Sample ID: S-5A(0.5)

Lab Sample ID: JA75602-32

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 81.7

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte Result RL Units DF Ргер Analyzed By Method Prep Method 215 2.4 mg/kg 1 SW846 3050B ² Lead 05/23/11 05/24/11 GT SW846 6010B ¹

Page 1 of 1

SW846 3050B ²

Client Sample ID: S-6(1.5) Lab Sample ID:

JA75602-35

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11

Percent Solids: 87.2

SW846 6010B ¹

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Analyte Result RLUnits DF Prep Method

05/23/11 05/24/11 GT

71.6 2.2 Lead mg/kg 1

Page 1 of 1

Client Sample ID: S-7(1.5) Lab Sample ID:

Matrix:

JA75602-37 SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 84.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

RLUnits DF Analyzed By Method Prep Method Analyte Result Prep Lead 103 2.4 mg/kg 1 $05/23/11 \ 05/24/11 \ \mathrm{GT}$ SW846 6010B ¹ SW846 3050B ²

Page 1 of 1

Report of Analysis

Client Sample ID: S-8(1.5) Lab Sample ID:

JA75602-39

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 88.6

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method Analyte Result RL Units DF Ргер 54.7 2.3 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ² Lead

Page 1 of 1

Client Sample ID: S-9(0.5) Lab Sample ID:

JA75602-41

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11 Percent Solids: 78.5

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Prep Method Analyte Result RLUnits DF Prep Method Lead 864 2.0 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ²

Page 1 of 1

Client Sample ID: S-9(1.5) Lab Sample ID:

JA75602-42

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 81.5

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	529	2.5	mg/kg	1	06/09/11	06/14/11 ND	SW846 6010B ¹	SW846 3050B ²

Page 1 of 1

Client Sample ID: S-10(0.5) Lab Sample ID:

JA75602-44

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11 Percent Solids: 83.2

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyte

Result

RL

Units DF

Analyzed By Prep

Method

Prep Method

Lead

307

2.4

mg/kg 1

05/23/11 05/24/11 GT

SW846 6010B ¹

SW846 3050B ²

(1) Instrument QC Batch: MA26421

(2) Prep QC Batch: MP58329

Page 1 of 1

Client Sample ID: S-11(0.5) Lab Sample ID:

JA75602-47

Matrix: SO - Soil Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 83.5

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Result RLUnits DF Prep Analyzed By Method Analyte 72.3 2.4 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ² mg/kg 1 Lead

Page 1 of 1

Client Sample ID: S-12(0.5) Lab Sample ID:

JA75602-50

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 80.9

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method Analyte Result RL Units DF Prep 729 2.5 mg/kg 1 05/23/11 05/24/11 GT SW846 6010B ¹ SW846 3050B ² Lead

Page 1 of 1

Client Sample ID: S-12(1.5) Lab Sample ID:

JA75602-51

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 82.6

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Result RLUnits DF Prep Analyzed By Method Analyte 2.4 06/09/11 06/14/11 ND SW846 6010B ¹ SW846 3050B 2 650 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: S-13(0.5) Lab Sample ID:

JA75602-53

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 79.4

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyte Result RLUnits DF Prep Analyzed By Method 774 2.5 05/20/11 05/21/11 GT SW846 6010B ¹ SW846 3050B ² Lead mg/kg 1

Page 1 of 1

Client Sample ID: S-13(1.5) Lab Sample ID:

JA75602-54

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 83.3

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method Analyte Result RLUnits DF Prep 436 2.4 mg/kg 1 06/09/11 06/14/11 ND SW846 6010B ¹ SW846 3050B ² Lead

Page 1 of 1

Client Sample ID: S-14(0.5) Lab Sample ID: JA75602-56

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 83.1

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 344
 2.5
 mg/kg
 1
 05/20/11
 05/21/11
 GT
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID: Lab Sample ID:

S-15(0.5)JA75602-59

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11 Percent Solids: 75.0

Project:

Matrix:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method RLUnits DF Ргер Result Analyte SW846 3050B ² SW846 6010B ¹ 70.0 2.6 mg/kg 1 05/20/11 05/21/11 GT Lead

Page 1 of 1

Client Sample ID: S-16(0.5)

Lab Sample ID:

JA75602-62

Date Sampled:

05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11 Percent Solids:

90.5

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method RLUnits DF Prep Result Analyte SW846 3050B ² 05/20/11 05/21/11 GT SW846 6010B ¹ 2.2 mg/kg 1 16.5 Lead

Page 1 of 1

Client Sample ID: FIELD BLANK

Lab Sample ID: Matrix:

JA75602-65 AQ - Field Blank Soil Date Sampled: 05/10/11

Date Received:

05/11/11 Percent Solids: n/a

Project:

Veterans Hospital, Wilkes Barre, PA

Total Metals Analysis

Prep Method Analyzed By Method RLUnits DF Prep Analyte Result SW846 3010A ² 05/21/11 05/22/11 GT < 3.0 3.0 ug/l SW846 6010B ¹ Lead

Page 1 of 1

Client Sample ID: S-8A(0.5)

Lab Sample ID: JA75602-66 Matrix: SO - Soil Date Sampled: 05/10/11 Date Received: 05/11/11 Percent Solids: 80.1

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

 Analyte
 Result
 RL
 Units
 DF
 Prep
 Analyzed By
 Method
 Prep Method

 Lead
 453
 2.5
 mg/kg
 1
 05/20/11
 05/21/11
 GT
 SW846 6010B 1
 SW846 3050B 2

Page 1 of 1

Client Sample ID: S-8A(1.5) Lab Sample ID:

JA75602-67

Date Sampled: 05/10/11

Matrix:

SO - Soil

Date Received: 05/11/11

Percent Solids: 82.9

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Prep Method Analyzed By Method RLUnits DF Prep Analyte Result SW846 3050B ² 06/09/11 06/14/11 ND SW846 6010B ¹ 293 2.4 mg/kg 1 Lead



07/12/11



Technical Report for

Hatch Mott MacDonald

Veterans Hospital, Wilkes Barre, PA

264336

Accutest Job Number: JA75602R

Sampling Date: 05/10/11



Hatch Mott MacDonald, I & E. P.O. Box 1008 27 Bleeker Street Millburn, NJ 07041 Sandra, Howland@hatchmott.com

ATTN: Kevin Herrighty

Total number of pages in report: 87



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis VP, Laboratory Director

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.





CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Hatch Mott MacDonald Job No JA75602R

Site: Veterans Hospital, Wilkes Barre, PA Report Date 7/12/2011 2:47:04 PM

On 05/11/2011, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA75602R was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix: SO Batch ID: MP58952

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA79042-1MS, JA79042-1MSD, JA79042-1SDL were used as the QC samples for metals.

Wet Chemistry By Method SM18 2540G

Matrix: SO Batch ID: GN52635

The data for SM18 2540G meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



Sample Results	
Report of Analysis	



Page 1 of 1

Client Sample ID: S-9(2.5)

JA75602-43R Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 83.9

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method Analyte Result RLUnits DF Prep 1150 2.4 mg/kg 1 06/30/11 07/01/11 vc SW846 6010B ¹ SW846 3050B ² Lead

Page 1 of 1

Client Sample ID: S-12(2.5)

Lab Sample ID: JA75602-52R

Matrix:

SO - Soil

Date Sampled: 05/10/11

Date Received: 05/11/11

Percent Solids: 83.9

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

Analyzed By Method Prep Method RLUnits DF Prep Analyte Result 2.4 06/30/11 07/01/11 vc SW846 6010B ¹ SW846 3050B ² 405 mg/kg 1 Lead

Page 1 of 1

Client Sample ID: S-13(2.5)

JA75602-55R Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 05/10/11

05/11/11

Date Received: Percent Solids: 84.3

Project:

Veterans Hospital, Wilkes Barre, PA

Metals Analysis

RLAnalyzed By Prep Method Analyte Result Units DF Prep Method SW846 3050B ² 2.4 Lead 413 mg/kg 1 06/30/11 07/01/11 VC SW846 6010B ¹



N. # t	T
Misc.	Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



1

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JA75602R: Chain of Custody

Page 1 of 10



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JA75602R: Chain of Custody

Page 2 of 10



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OI - Oil Other Liquid SR - Air Other Solid P - Wipe Sald Blank Ipment Blank Irrip Blank Irrip Blank	4
USE ONLY	

PAGE <u>3</u> OF <u>6</u>

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JA75602R: Chain of Custody

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JA75602R: Chain of Custody

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JA75602R: Chain of Custody

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ATTACHMENT 4

Soil Analytical Results - September 13, 2012



ANALYTICAL REPORT

Lab Number:

L1216482

Client:

Hatch Mott MacDonald

27 Bleeker Street

Millburn, NJ 07041

ATTN:

Kevin Herrighty

Phone:

(973) 912-2480

Project Name:

VA-EWT WILKES BARRE

Project Number:

264336

Report Date:

09/21/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:

VA-EWT WILKES BARRE

Project Number: 264336

Lab Number:

L1216482

Report Date:

09/21/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1216482-01	S-12 3.0-3.5	WILKES BARRE, PA	09/13/12 09:25
L1216482-02	S-13 3.0-3.5	WILKES BARRE, PA	09/13/12 09:40
L1216482-03	S-9 3.0-3.5	WILKES BARRE, PA	09/13/12 09:50
L1216482-04	S-17 0-0.5	WILKES BARRE, PA	09/13/12 10:00
L1216482-05	S-17 1.0-1.5	WILKES BARRE, PA	09/13/12 10:15
L1216482-06	S-17 2.0-1.5	WILKES BARRE, PA	09/13/12 10:30
L1216482-07	S-18 0-0.5	WILKES BARRE, PA	09/13/12 10:45
L1216482-08	S-18 1.0-1.5	WILKES BARRE, PA	09/13/12 10:55
L1216482-09	S-18 2.0-1.5	WILKES BARRE, PA	09/13/12 11:10
L1216482-10	S-19 0-0.5	WILKES BARRE, PA	09/13/12 11:25
L1216482-11	S-19 1.0-1.5	WILKES BARRE, PA	09/13/12 11:50
L1216482-12	S-19 2.0-1.5	WILKES BARRE, PA	09/13/12 12:10
L1216482-13	FB-091312	WILKES BARRE, PA	09/13/12 09:30

Project Name:

VA-EWT WILKES BARRE

Project Number: 2

264336

Lab Number:

L1216482

Report Date:

09/21/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.



Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

600 Jew Tow Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 09/21/12

METALS

L1216482

09/21/12

Lab Number: **Project Name: VA-EWT WILKES BARRE Report Date: Project Number:** 264336

L1216482-01

SAMPLE RESULTS Date Collected: 09/13/12 09:25

Client ID: S-12 3.0-3.5 Date Received: 09/14/12 Field Prep: Not Specified WILKES BARRE, PA Sample Location:

Matrix: Soil Percent Solids: 89%

Analytical Method Dilution Date **Date** Prep Factor Prepared **Analyzed** Method MDL Analyst **Parameter** Result Qualifier Units RL Total Metals - Westborough Lab 09/20/12 11:55 09/20/12 18:10 EPA 3050B 1,6010C MG Lead, Total 50 0.25 2 mg/kg 4.2

Lab ID:

Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

SAMPLE RESULTS

Lab ID:

Lead, Total

L1216482-02

Client ID:

S-13 3.0-3.5

WILKES BARRE, PA

mg/kg

Sample Location: Matrix:

Percent Solids:

Soil

89%

360

Date Collected:

09/13/12 09:40

Date Received:

09/20/12 11:55 09/20/12 18:14 EPA 3050B

09/14/12

Field Prep:

Not Specified

1,6010C

MG

Percent Solids:	89%					Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Wes	tborough L	_ab			5.8			*-			
Total Metals - Wes	iborougii i	_ab									

2

0.26

4.3

Project Name: VA-EWT WILKES BARRE Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

Lab ID:

SAMPLE RESULTS

Date Collected:

09/13/12 09:50

Client ID:

L1216482-03 S-9 3.0-3.5

Date Received:

09/14/12

Sample Location:

WILKES BARRE, PA

Qualifier

Field Prep:

Not Specified

Matrix:

Soil

Percent Solids:

Parameter

93% Result

MDL

0.25

Dilution **Factor**

Date Prepared

Date Prep Analyzed Method Analytical Method Analyst

Total Metals - Westborough Lab

Lead, Total

53

mg/kg

Units

4.1

RL

2

09/20/12 11:55 09/20/12 18:17 EPA 3050B

1,6010C

MG

L1216482

09/14/12

09/13/12 10:00

Not Specified

MG

Lab Number: **Project Name: VA-EWT WILKES BARRE Report Date: Project Number:** 264336

09/21/12

Date Collected:

Date Received:

Field Prep:

SAMPLE RESULTS

Lab ID: L1216482-04 Client ID: S-17 0-0.5

WILKES BARRE, PA

Sample Location:

Matrix: Soil

Percent Solids: 86% Analytical Method **Dilution Date** Date Prep **Factor** Prepared **Analyzed** Method Parameter Result Qualifier Units RL MDL. Analyst

Total Metals - Westborough Lab

1,6010C Lead, Total 220 4.4 0.27 2 09/20/12 11:55 09/20/12 18:21 EPA 3050B mg/kg

Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

Lab ID:

SAMPLE RESULTS

09/13/12 10:15

Client ID:

L1216482-05

Date Collected: Date Received:

09/14/12

Sample Location:

S-17 1.0-1.5 WILKES BARRE, PA

Field Prep:

Not Specified

Matrix:

Parameter

Soil

Percent Solids:

86%

Result

Qualifier

Dilution Factor MDL

2

Date **Prepared**

Date Analyzed

Analytical Method Prep Method

Total Metals - Westborough Lab

Lead, Total

27

mg/kg

Units

4.5

RL

0.27

09/20/12 11:55 09/20/12 18:24 EPA 3050B

1,6010C

MG

Project Name: VA-EWT WILKES BARRE Project Number: 264336

Lab Number:

L1216482

Report Date:

09/21/12

Lab ID:

SAMPLE RESULTS

Date Collected:

09/13/12 10:30

Client ID:

L1216482-06 S-17 2.0-1.5

Date Received:

09/14/12

Sample Location:

WILKES BARRE, PA

Qualifier

Field Prep:

Not Specified

Matrix:

Parameter

Soil

Percent Solids:

87%

Result

Dilution Factor MDL

Date **Prepared**

Date Analyzed

Analytical Method Prep Method

Total Metals - Westborough Lab

Lead, Total

27

mg/kg

Units

0.26

RL

4.4

2

09/20/12 11:55 09/20/12 18:27 EPA 3050B

1,6010C

MG

Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

SAMPLE RESULTS

MDL

0.27

Lab ID:

L1216482-07

Date Collected:

09/13/12 10:45

Client ID:

S-18 0-0.5

Date Received:

09/14/12

Method

Sample Location: Matrix:

Parameter

Soil

Result

WILKES BARRE, PA

Qualifier

Field Prep:

Not Specified

84%

Percent Solids:

Dilution Date Date **Factor Prepared Analyzed**

Analytical Method Prep

Total Metals - Westborough Lab

Lead, Total

69

mg/kg

Units

4.5

RL

2

09/20/12 11:55 09/20/12 18:31 EPA 3050B

1,6010C

MG

Project Name: VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

Lab ID:

SAMPLE RESULTS

Date Collected:

09/13/12 10:55

Client ID:

L1216482-08

09/14/12

Sample Location:

S-18 1.0-1.5

WILKES BARRE, PA

Qualifier

Date Received:

Matrix:

Parameter

Soil

Field Prep:

Not Specified

Percent Solids:

86%

Result

Prep Analytical Method Dilution Date Date Analyzed **Factor** Prepared Method Analyst

Total Metals - Westborough Lab

Lead, Total

14

mg/kg

Units

0.26

MDL

RL

4.4

2 09/20/12 11:55 09/20/12 18:34 EPA 3050B

1,6010C

MG

Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

SAMPLE RESULTS

Lab ID:

Parameter

L1216482-09

S-18 2.0-1.5

Date Collected:

09/13/12 11:10

Client ID:

Date Received:

09/14/12

Sample Location: Matrix:

Soil

20

Field Prep:

Not Specified

Percent Solids: 88%

Analytical Method **Dilution** Date Date Prep **Factor** Prepared **Analyzed** Method Qualifier MDL Result Units RL **Analyst**

Total Metals - Westborough Lab

Lead, Total

mg/kg

WILKES BARRE, PA

4.4 0.26 2 09/20/12 11:55 09/20/12 18:38 EPA 3050B

1,6010C

MG

Project Name: VA-EWT WILKES BARRE Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

SAMPLE RESULTS

Lab ID:

L1216482-10

Date Collected:

09/13/12 11:25

Client ID:

S-19 0-0.5

Date Received:

09/14/12

Sample Location:

WILKES BARRE, PA

Qualifier

Field Prep:

Date

Prepared

Not Specified

Matrix:

Parameter

Soil

Percent Solids:

90%

Result

Dilution Factor

Prep Method Analytical Method Date

Total Metals - Westborough Lab

Lead, Total

350

mg/kg

Units

4.2

MDL

0.25

RL

2

09/20/12 11:55 09/20/12 18:56 EPA 3050B

Analyzed

1,6010C

MG

Project Name:

VA-EWT WILKES BARRE

Qualifier

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

SAMPLE RESULTS

Lab ID:

L1216482-11

S-19 1.0-1.5

09/13/12 11:50

Client ID:

Date Collected: Date Received:

09/14/12

Sample Location:

WILKES BARRE, PA

Field Prep:

Not Specified

Matrix:

Soil

Percent Solids:

Parameter

90%

Result

Dilution **Factor** Units RL MDL

Date Prepared

Date Prep Method Analyzed

Analytical Method Analyst

Total Metals - Westborough Lab

Lead, Total

360

mg/kg

0.25 4.2

2

09/20/12 11:55 09/20/12 18:59 EPA 3050B

1,6010C

MG

Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

Lab ID:

SAMPLE RESULTS

MDL

0.25

Date Collected:

09/13/12 12:10

Client ID:

L1216482-12 S-19 2.0-1.5

Date Received:

09/14/12

Method

Sample Location:

WILKES BARRE, PA

Qualifier

Field Prep:

Not Specified

Matrix:

Parameter

Soil

Result

Percent Solids: 92%

Analytical Method Dilution Date Prep Date **Factor** Prepared

Total Metals - Westborough Lab

Lead, Total 320 mg/kg

Units

4.2

RL

2

09/20/12 11:55 09/20/12 19:03 EPA 3050B

Analyzed

1,6010C

MG

Project Name:

VA-EWT WILKES BARRE

Lab Number:

L1216482

Project Number:

264336

Report Date:

09/21/12

Lab ID:

SAMPLE RESULTS

Date Collected:

09/13/12 09:30

Client ID:

L1216482-13

FB-091312

WILKES BARRE, PA

Date Received:

09/14/12

Sample Location:

Water

Matrix:

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - W	/estborough L	_ab									
Lead, Total	ND		mg/l	0.0010	0.0002	1	09/20/12 12:4:	2 09/21/12 12:1	6 EPA 3005A	1,6020A	AK

ALPHA JOB #: U/2/ W/82	Billing Information		Site Information	Is this site impacted by Petroleum? Yes (No (pircle one) Product Ser Type 2-1 or reverse see)	Petroleum Product:	Are any samples for waste (disposal? Yes (ANO) (circle one) Press (page 1) (circle one)	SAMPLE HANDLING T	Filtration L	70	(Phase specify holow)											Please print clearly legibly and com-	pletely. Samples can not be logged	start until any ambiguities are resolved O	All samples submitted are subject to the Alpha's Terms and Conditions.	7934 See reverse side.
				1	ndards					//////									1					E Par	ma 9/4/1 2
- Date Rec'd in Lab: 9./4./7	Report Type Data Summary DNJ Full	Zerla Reduced Other	Regulatory Requirements	Z SRS-Residential Non Residential ☐ SRS-Impact To Groundwater	■ NJ Ground Water Quality Standards		Sis	3 353 17VA	7 72	707/18	×	/ ×	7	*	X	У.	Y	X	7		÷	-	Received By:	"may " &	Track Comments
PAGE OF	- Wilkes Barry	Beare P.A.	36	therrights			L KUSH (only continued if pre-approved!)	of the following:		Sample Sampler's			5	/ 0	2	0	\sqrt{2}	55			Container Type	Preservative	Date/Time	7/14/12 1000	9/14/12 2200
USTODY	Project Information Project Name: 1/4 - EWT - 1,3 1/25 Barre	Project Location: (W. Keyne P.A.	Project #: 26433	Project Manager: Rais H	Turn-Around Time		9	Please check one of	ory 2	Collection	02/2	12	0560	0001	3101	000/	1045	105	Ont	7	Westboro: Certification No: MA935	icatolino: MAUIS	Relinquished By:	W. W.	to make
NJ CHAIN OF CUSTODY	MANISFIELD, MA 320 Forbes Blvd TEL: 508-622-8390 Proj FAX: 508-822-3289		Mott Medenal 6 Proj	S.t	(S)	note.	-	7	ny 1 🔋 🗀 Categony 2	Sample ID	12 32-35	13 30-35	9 30-35	110-0.5	17 (10-15)		18 0-0.5	ò	-12 20-13	190-0.5	Westboro: Certii	אומוזאובותי רבות	Z MRei	Carried States	The state of the s
CN AHA		Client Information	Client: Hatch Mct	Heal	33-914	ФFax 973 -СмЭ	Email (Evin , herright ye hutch Mottice of Those samples have been previously analyzed by Alpha	For EPH you MUST inc	□ Category 1	ALPHA Lab. ID (Lab Use Only)	-S 1 -7879	+	3 5-	-S 3	\S	\S \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	4.8	ه مح	へ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・	-S OI	Preservative Code:	6 = HVO3	D = M2504 E = NaOH F = MeOH	G = NaHSO4 H = Other	FORM NO: 01-14 (rev. 30-AUG-10)

A SHA	NJ CHAIN OF CUSTODY	CUSTODY PAGE 22 OF 22	Date Rec'd in Lab: 9.19.12	ALPHA JOB #: 61216483
WESTBORO, MA 8 Walkup Drive	MANSFIELD, MA 320 Forbes Blvd	Project Information	Report Type	Billing Information
	TEL: 508-822-9300 FAX: 508-822-3288	Project Name: VAEUT Willes Berre	Data Summary ONJ Full	X Same as Client info PO #:
Client Information	ນຕ	Project Location:	Any Reduced Comer	
h-teh	MatherDonald	Project #: 264336	Kegulatory Kequirements	Site Information
		Project Manager.	AFSRS-Residential/Non Residential	is this site impacted by Petroleum? Yes ///o (circle one)
Z Z	Day I	ALPHA Quote #:	☐ SRS-Impact To Groundwater ☐ NJ Ground Water Quality Standards	(Please Inficate Petrateun Product - See Table 2-1 on reverse side) Petroleum Product:
eria Phone:	0 /	Turn-Around Time	Office	Are any samples for waste disposal?
о Бах:		□ Standard □ RUSH (only continued if the accorded)		Yes (No (circle one) (Please Notice which sumples below in Sultiple Specific Comments field)
Email:		đ	/ / / / / / / / / / / / / / 6	
☐ These samples hav	These samples have been previously analyzed by Alpha	1.4.1	T P ISA	SAMPLE HANDLING
For EPH you MI	For EPH you MUST indicate Category 1 or 2.	2. Please check one of the following:	MAL	ĺ
) []	⊡ Category 1 □ Ca	□ Category 2		☐ Lab to do
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Sample Sampler's		(Molecular Alberta See See See See See See See See See Se
11,000	מין	Cate IIII		Sample Specific Comments
0		3 413/12 1130 Seil 174	χ,	
7	5-12 20-1:	5 1210 Soil		
3	FB-091312	L 0930 Weter 1	X	
10				
Preservative Code: A = None B = HCI	e	Westboro: Certification No: MA935 Container Type Mansfield: Certification No: MA015 Preservetive		Please print clearly, legibly and com- pletely. Samples can not be loaded
C = HNO3 D = H2SO4				in and turnaround time clock will not
E = NaOH F = MeOH G = NaHSO4 H = Other	The state of the s	September of State Lime	Month with 12	Date/Time start until any ambiguities are resolved to Will samples submitted are subject to Albha's Terms and Conditions.
FORM NO: 01-14 (rev. 30-AUG-10)	4UG-10)	the Maiss Spring 223	Of the man offer	

